



# TECHNICAL SERVICE BULLETIN

SUBJECT:

## PISTON PIN INSTALLATION TOOL INSTRUCTIONS

NO. TSB-91-11-010

DATE July, 1991

MODEL All

### PURPOSE

This bulletin updates the OTC Piston Pin Service Set operating instructions to include 1992 engines. An illustration and parts list for the Piston Pin Service Set appears on Page 5 of this bulletin. When using the Piston Pin Service Set, use these operating instructions.

### OPERATING INSTRUCTIONS

#### PISTON PIN REMOVAL

1. Remove the stop screw from the base.  
See Figure 1.

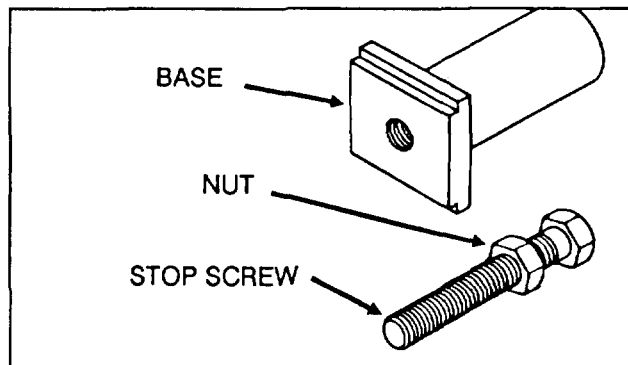


Figure 1

2. Refer to the application chart on Page 4, and select the correct piston support for your application. Fit the piston support onto the base. Place the base onto press support blocks. See Figure 2.

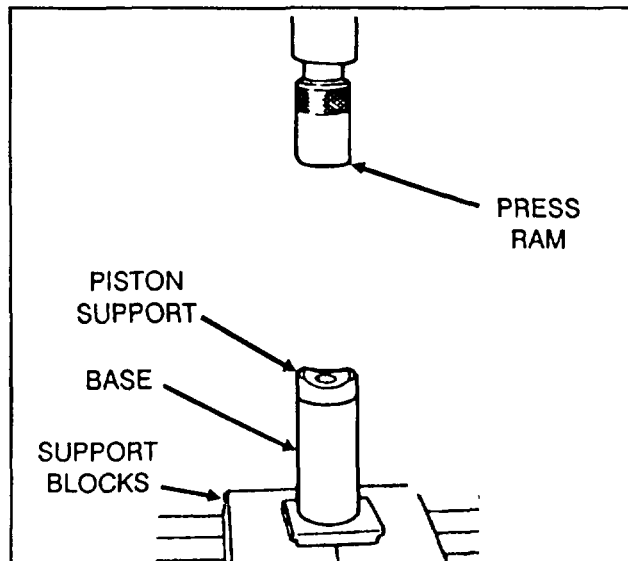


Figure 2

Continued...

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FILE UNDER: Group 11 Engine in the Dealer Service Information Binder

(987)

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3. Insert the press pin through the piston pin hole. Refer to the application chart on Page 4 to select the correct connecting rod guide pin. Thread the guide pin onto the threaded portion of the press pin. See Figure 3.

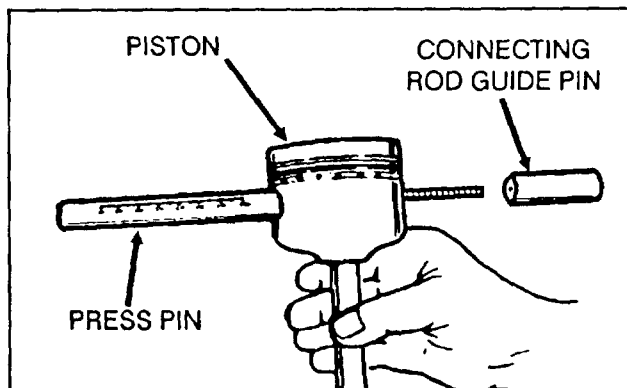


Figure 3

4. Position the piston assembly on the piston support in the press. With the press pin up as shown in Figure 4, insert the guide pin through the hole in the piston and through the hole in the piston support.

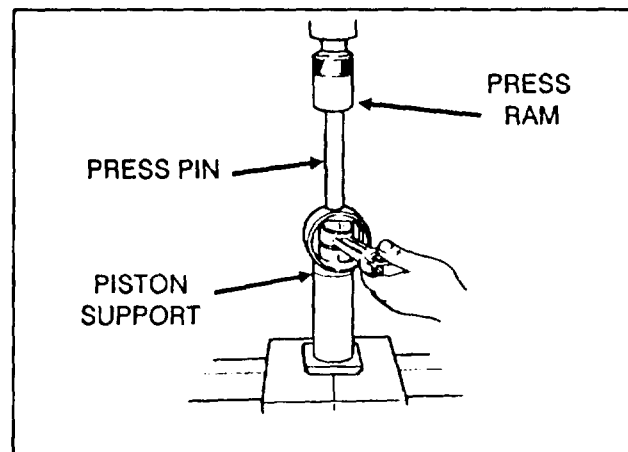


Figure 4

5. Press the piston pin out of the assembly (Figure 4).

**NOTE:** Make certain the piston support seats squarely against the piston and that the piston pin will slide through the hole in the piston support.

6. Remove the piston pin from the press pin.

## PISTON PIN INSTALLATION

1. Thread the stop screw and lock nut assembly into the base. Fit the correct piston support on top of the base. Insert the press pin, threaded end up, into the hole in the piston support until its end touches the stop screw. See Figure 5.

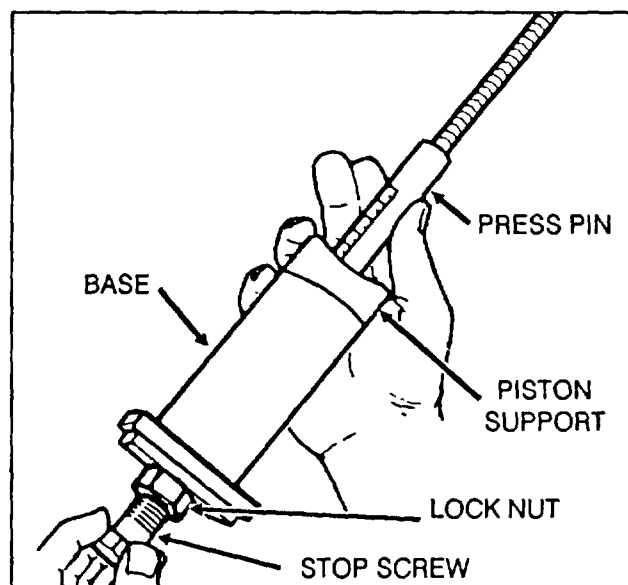


Figure 5

Continued...

2. Using the markings on the press pin, adjust the stop screw to the correct depth according to the application chart on Page 4. Tighten the lock nut.

**NOTE:** The piston pin depth set location is measured on the piston support as shown in Figure 6. If a curved support is being used, measure to the bottom center of the curve. For a flat support, measure to the lowest point of the flat surface.

3. Place the base onto press support blocks.
4. Slide the piston pin over the threaded end of the press pin, and thread the correct guide pin up against it.

5. Coat the piston pin with oil, and with the connecting rod held in position, slide the guide pin through the piston and connecting rod. See Figure 7.
6. Press the piston pin through the connecting rod until the guide pin contacts the stop screw.
7. Remove the piston assembly from the base. Remove the guide pin and press pin from the assembly.

**CAUTION:** Due to production tolerance variations, it is necessary to visually inspect the piston pin depth after installation to verify that the piston pin is centered. Adjust if necessary.

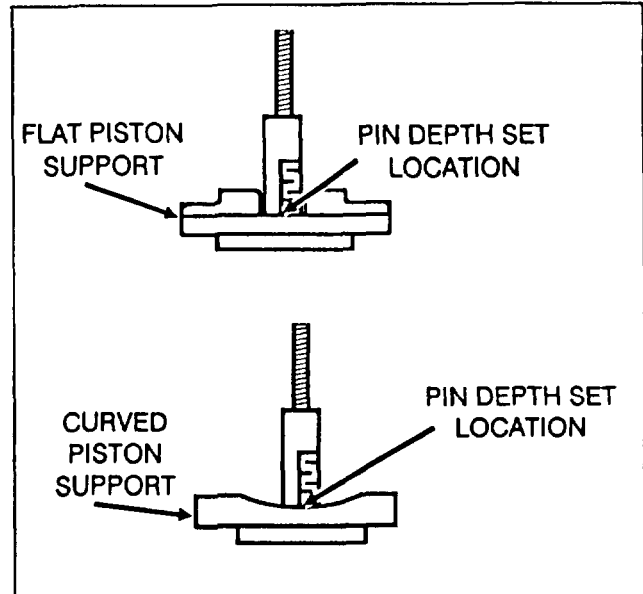


Figure 6

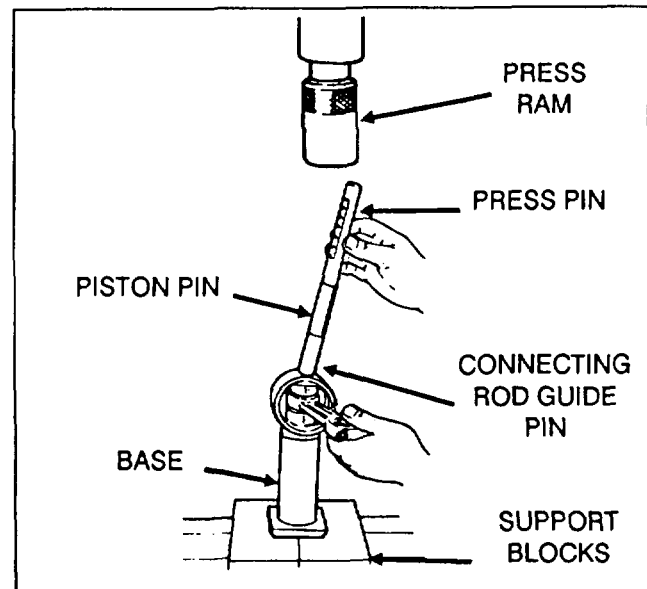


Figure 7

Continued...

## APPLICATION CHART

| ENGINE SIZE/<br>ENGINE TYPE | VALVE TYPE | FUEL DELIVERY SYSTEM | MODEL YEAR           | MODEL                                  | PISTON SUPPORT | GUIDE PIN | PIN SETTING DEPTH |
|-----------------------------|------------|----------------------|----------------------|----------------------------------------|----------------|-----------|-------------------|
| 1.5L<br>G4AJ                | SOHC       | CARB or MPI          | 87 ⇒                 | Precis                                 | MIT310140      | MIT310137 | 49                |
| 1.5L<br>4G15                | SOHC       | MPI                  | 89 <sup>1</sup> ⇔ 90 | Mirage                                 | MIT310140      | MIT310137 | 50                |
| 1.5L<br>G15B/4G15           | SOHC       | CARB or MPI          | 85 ⇔ 88, 91          | Mirage                                 | MIT310140      | MIT310137 | 49                |
| 1.6L<br>G32B                | SOHC       | ECI-TURBO            | 85 ⇔ 88              | Mirage                                 | MIT310142      | MIT310138 | 59                |
| 1.6L<br>4G61                | DOHC       | MPI or MPI-TURBO     | 89 ⇒                 | Mirage                                 | MIT310136      | MIT310139 | 56                |
| 1.8L<br>G62B                | SOHC       | CARB                 | 83                   | Cordia/<br>Tredia                      | MIT310142      | MIT310139 | 65                |
| 1.8L<br>G62B                | SOHC       | ECI-TURBO            | 84 ⇔ 88              | Cordia/<br>Tredia                      | MIT310142      | MIT310139 | 66                |
| 1.8L<br>4G37                | SOHC       | MPI                  | 90 ⇒                 | Eclipse                                | MIT310136      | MIT310138 | 52                |
| 1.8L<br>4G93                | SOHC       | MPI                  | 92                   | Expo LRV                               | MIT310140      | MIT310138 | 50                |
| 2.0L<br>G63B/4G63           | SOHC       | CARB or MPI          | 84 ⇒                 | Cordia/<br>Tredia,<br>Truck,<br>Galant | MIT310136      | MIT310139 | 56                |
| 2.0L<br>4G63                | DOHC       | MPI or MPI-TURBO     | 89 ⇒                 | Eclipse<br>Galant                      | MIT310136      | MIT310139 | 55                |
| 2.4L<br>G64B/4G64           | SOHC       | ECI<br>MPI           | 85 ⇒                 | Truck,<br>Galant,<br>Van/Wagon         | MIT310136      | MIT310139 | 56                |
| 2.6L<br>G54B                | SOHC       | CARB or<br>ECI-TURBO | 83 ⇔ 89              | Starion,<br>Truck,<br>Montero          | MIT310136      | MIT310141 | 63                |
| 3.0L<br>6G72                | SOHC       | MPI                  | 88 ⇒                 | Sigma,<br>Truck,<br>Montero            | MIT310136      | MIT310141 | 60                |
| 3.0L<br>6G72                | SOHC       | MPI                  | 92                   | Diamante                               | MIT310136      | MIT310141 | 62 *              |
| 3.0L<br>6G72                | DOHC       | MPI or<br>MPI-TURBO  | 91 ⇒<br>92           | 3000GT<br>Diamante                     | MIT310136      | MIT310141 | 62 *              |

## NOTES:

1 = Manufactured between 8-88 and 5-90

\* = These pistons are not symmetrical. The "Triple Diamond" symbol near the piston pin bore must be visible on the top of the piston during pin installation.

## LEGEND:

DOHC = Dual Overhead Cam

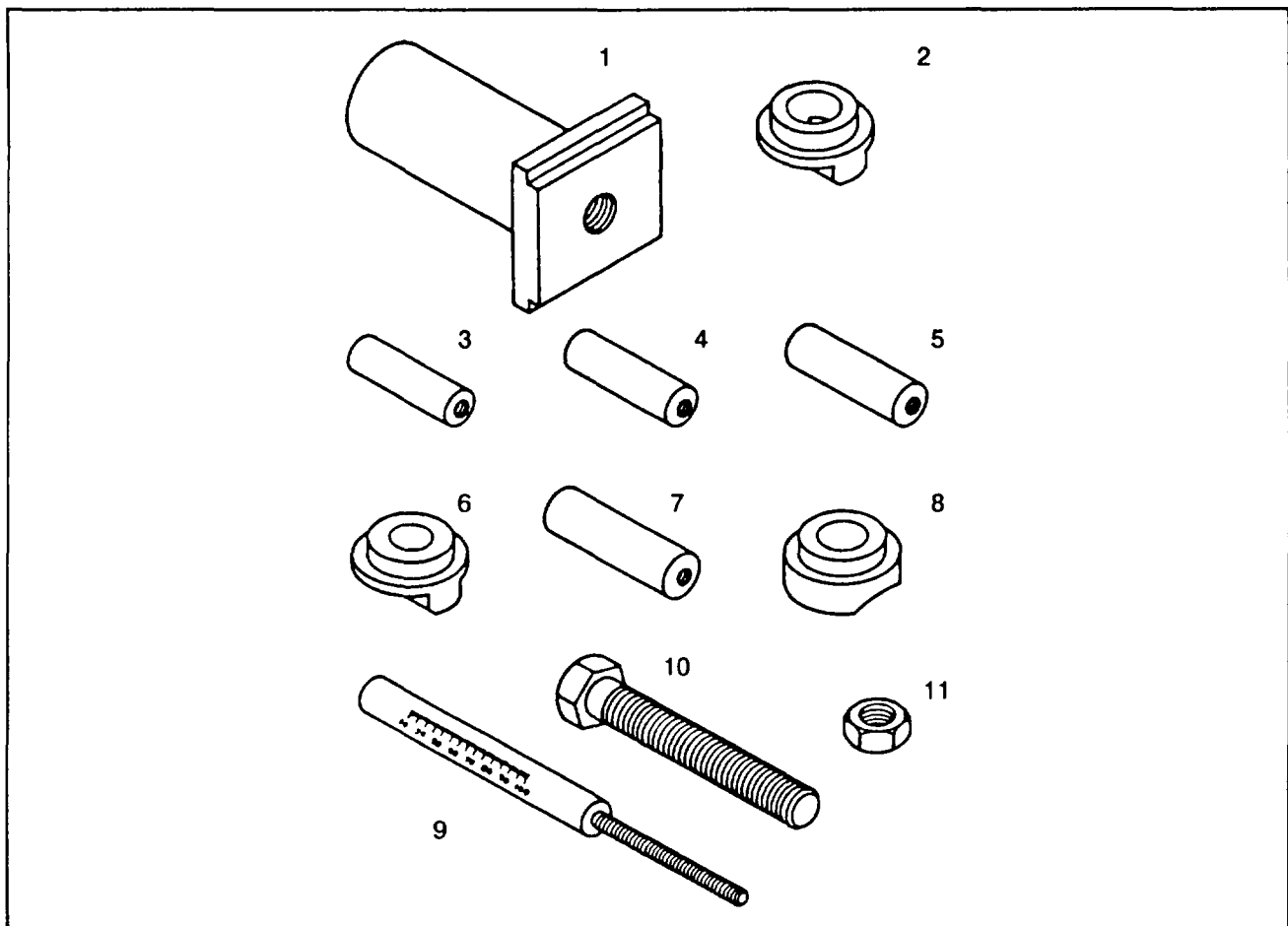
SOHC = Single Overhead Cam

⇒ = To present

⇔ = Inclusive

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## PISTON PIN SERVICE SET



| ITEM NO.     | PART NO.         | NO. REQ'D   | DESCRIPTION              |
|--------------|------------------|-------------|--------------------------|
| 1 . . . . .  | MIT310134 . . .  | 1 . . . . . | BASE                     |
| 2 . . . . .  | MIT310136 . . .  | 1 . . . . . | PISTON SUPPORT           |
| 3 . . . . .  | MIT310137 . . .  | 1 . . . . . | CONNECTING ROD GUIDE PIN |
| 4 . . . . .  | MIT310138 . . .  | 1 . . . . . | CONNECTING ROD GUIDE PIN |
| 5 . . . . .  | MIT310139 . . .  | 1 . . . . . | CONNECTING ROD GUIDE PIN |
| 6 . . . . .  | MIT310140 . . .  | 1 . . . . . | PISTON SUPPORT           |
| 7 . . . . .  | MIT310141 . . .  | 1 . . . . . | CONNECTING ROD GUIDE PIN |
| 8 . . . . .  | MIT310142 . . .  | 1 . . . . . | PISTON SUPPORT           |
| 9 . . . . .  | MIT48143 . . .   | 1 . . . . . | PRESS PIN                |
| 10 . . . . . | 216943 . . . . . | 1 . . . . . | STOP SCREW               |
| 11 . . . . . | 10396 . . . . .  | 1 . . . . . | NUT                      |